

WHAT IS CLAIMED IS:

1. An image forming apparatus which forms an image on a recording medium comprising:
  - an image input section which inputs an image,
  - 5 a size selection section which selects a size of a recording medium on which an image input by the image input section is formed,
  - 10 a toner image forming section which forms a toner image of the image input by the image input section on the recording medium with the size selected by the size selection section,
  - 15 a fixing section having a fixing member which heats and fixes the toner image formed on the recording medium by the toner image forming section onto the recording medium, and a heater divided into a plurality of systems used to respectively heat a plurality of divided regions of the fixing member, and
  - 20 a control section which determines allocation power amounts to be supplied to the respective systems of the heater according to the size of the recording medium selected by the size selection section and supplies the allocation power amounts to the respective systems of the heater when the fixing member is required to be warmed up.
- 25 2. The image forming apparatus according to claim 1, wherein the heater is an induction heater which heats the fixing member by induction heating

according to the power supplied from the control section.

3. The image forming apparatus according to claim 1, wherein the control section supplies power only to one of the plurality of systems of the heater which corresponds to a recording medium of the size selected by the size selection section at the warm-up time.

4. The image forming apparatus according to claim 1, which further comprises an image rearranging section used to change an output order of images and in which the image input section sequentially inputs a plurality of images, the size selection section selects the size of a recording medium for each of the images input by the image input section, the image rearranging section rearranges the plurality of images input by the image input section in order of small size of the recording medium selected by the size selection section, and the control section determines allocation of power amounts to be supplied to the respective systems of the heater based on the order of the images rearranged by the image rearranging section.

5. The image forming apparatus according to claim 4, wherein the heater includes a first system which heats a first region of the fixing member to perform a fixing process with respect to a recording medium of a first size and a second system which heats

a second region of the fixing member to perform a fixing process with respect to a recording medium of a second size larger than the recording medium of the first size, the size selection section selects one of  
5 the recording medium of the first size and the recording medium of the second size larger than the recording medium of the first size for each of the images input by the image input section, the image rearranging section rearranges the order of the images  
10 input by the image input section to put the image to be formed on the recording medium of the first size before the image to be formed on the recording medium of the second size, and the control section determines allocation of a power amount to be supplied to the  
15 first system of the heater and a power amount to be supplied to the second system of the heater to first set the temperature of the first region to the fixing temperature and then set the temperature of the second region to the fixing temperature.

20 6. The image forming apparatus according to  
claim 5, wherein the toner image forming section forms toner images of the images on recording media of sizes selected by the size selection section in an order rearranged by the image rearranging section and  
25 sequentially supplies the recording media having the toner images formed thereon to the fixing section, and the control section determines allocation of a power

amount to be supplied to the first system of the heater  
and a power amount to be supplied to the second system  
thereof to set the temperature of the second region to  
the fixing temperature before the recording medium of  
5 the second size on which the toner image is formed by  
the toner image forming section is fed to the fixing  
section.

7. The image forming apparatus according to  
claim 6, wherein the control section determines  
10 allocation of the power amount to be supplied to the  
first system of the heater and the power amount to be  
supplied to the second system of the heater based on  
the number of images for which the recording media of  
the first size selected by the size selection section  
15 are used.

8. The image forming apparatus according to  
claim 4, wherein the control section determines power  
amounts to be continuously supplied to the respective  
systems of the heater by allocating preset power  
20 amounts to the respective systems of the heater based  
on the order of images rearranged by the image  
rearranging section.

9. The image forming apparatus according to  
claim 4, wherein the control section determines periods  
25 of time during which preset power amounts are supplied  
to the respective systems of the heater based on the  
order of images rearranged by the image rearranging

section.

10. The image forming apparatus according to  
claim 4, wherein the control section determines power  
amounts to be supplied to the respective systems of the  
5 heater and periods of time during which the preset  
power amounts are supplied to the respective systems of  
the heater based on the order of images rearranged by  
the image rearranging section.

11. A control method for an image forming  
10 apparatus which includes an image input section which  
inputs an image, a toner image forming section which  
forms a toner image of the image input by the image  
input section on a recording medium with a selected one  
of various sizes, and a fixing section having a fixing  
15 member which heats and fixes the toner image formed on  
the recording medium by the toner image forming section  
onto the recording medium and a heater divided into a  
plurality of systems used to respectively heat a  
plurality of divided regions of the fixing member,  
20 comprising:

inputting an image by use of the image input  
section,

selecting the size of a recording medium on which  
the image input by the image input section is formed,  
25 and

determining allocation power amounts to be  
supplied to the respective systems of the heater

according to the selected size of the recording medium  
and supplying the power amounts allocated to the  
respective systems of the heater to the respective  
systems of the heater when the fixing member is  
5 required to be warmed up.

12. The method for the image forming apparatus  
according to claim 11, further comprising supplying  
power only to a system which corresponds to a recording  
medium of the size selected by the size selection  
10 section among the plurality of systems of the heater at  
the warm-up time.

13. A control method for an image forming  
apparatus which includes an image input section which  
inputs an image, a toner image forming section which  
15 forms a toner image of the image input by the image  
input section on a recording medium with a selected one  
of various sizes, and a fixing section having a fixing  
member which heats and fixes the toner image formed on  
the recording medium by the toner image forming section  
20 onto the recording medium and a heater divided into a  
plurality of systems used to respectively heat a  
plurality of divided regions of the fixing member,  
comprising:  
25

sequentially inputting a plurality of images by  
use of the image input section,  
selecting sizes of recording media for the images  
input by the image input section,

rearranging the images input by the image input section in order of small size of the recording medium,

determining allocation power amounts to be supplied to the respective systems of the heater based on the order of the images rearranged by rearranging the images, and

supplying the power amounts allocated to the respective systems of the heater to the respective systems of the heater.

10        14. The method for the image forming apparatus according to claim 13, wherein the heater includes a first system which heats a first region of the fixing member to perform a fixing process with respect to a recording medium of a first size and a second system which heats a second region of the fixing member to perform a fixing process with respect to a recording medium of a second size larger than the recording medium of the first size, the selection of the size of the recording medium being to select one of the recording medium of the first size and the recording medium of the second size for each of the images input by the image input section, the image rearranging being to rearrange the order of the images input by the image input section to put the image for which the recording medium of the first size is selected before the image for which the recording medium of the second size is selected, and allocation of a power amount to be

supplied to the first system of the heater and a power amount to be supplied to the second system of the heater is determined to first set the temperature of the first region of the fixing member to the fixing 5 temperature and then set the temperature of the second region of the fixing member to the fixing temperature.

15. The method for the image forming apparatus according to claim 14, wherein allocation of the power amount to be supplied to the first system of the heater and the power amount to be supplied to the second system of the heater is determined to set the temperature of the second region of the fixing member to the fixing temperature after the first region of the fixing member was first set to the fixing temperature 10 and before the recording medium of the second size on which the toner image is formed by the toner image forming section is fed to the fixing section.

15. The method for the image forming apparatus according to claim 15, wherein allocation of the power amount to be supplied to the first system of the heater and the power amount to be supplied to the second system of the heater is determined based on the number 20 of recording media of the first size selected.

25. The method for the image forming apparatus according to claim 13, wherein allocation of the power amount to be supplied to the first system of the heater and the power amount to be supplied to the second

system of the heater is determined by allocating power amounts to be continuously supplied to the respective systems of the heater by use of a preset power amount based on the order of the images rearranged by the  
5 image rearranging.

18. The method for the image forming apparatus according to claim 13, wherein allocation of the power amount to be supplied to the first system of the heater and the power amount to be supplied to the second  
10 system of the heater is determined by allocating periods of time in which the preset power amounts are supplied to the respective systems of the heater based on the order of the images rearranged by the image rearranging.

15 19. The method for the image forming apparatus according to claim 13, wherein allocation of the power amount to be supplied to the first system of the heater and the power amount to be supplied to the second  
20 system of the heater is determined by allocating power amounts to be supplied to the respective systems of the heater and periods of time in which the preset power amounts are supplied to the respective systems of the heater based on the order of the images rearranged by the image rearranging.